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(71) Applicant *(for all designated States except US)*: KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: NGUYEN HOANG, Viet [VN/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). GRAVESTEIJN, Dirk, J. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). HOOFMAN, Romano, J., O., M. [NL/BE]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(74) Agent: DUIJVESTIJN, Adrianus, J.; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

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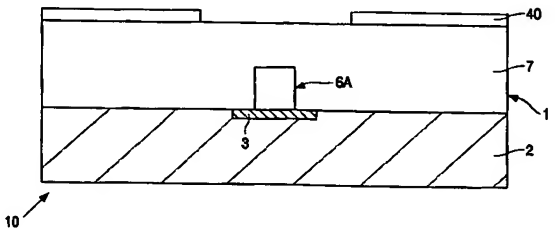
(54) Title: METHOD OF MANUFACTURING A SEMICONDUCTOR DEVICE AND SEMICONDUCTOR DEVICE OBTAINED BY MEANS OF SUCH A METHOD



(57) Abstract: The invention relates to the manufacture of a semiconductor device (10) with a semiconductor body (1) and a substrate (2) and comprising at least one semiconductor element (3), which semiconductor device is equipped with at least one connection region (4) and a superjacent strip-shaped connection conductor (5) which is connected to the connection region, which connection region and connection conductor are both recessed in a dielectric, and a dielectric region (6) of a first material is provided on the semiconductor body (1) at the location of the connection region (4) to be formed, after which the dielectric region (6) is coated with a dielectric layer (7) of a second material that differs from the first material, which dielectric layer is provided, at the location of the strip-shaped connection conductor (5) to be formed, with a strip-shaped recess (7A) which overlaps the dielectric region (6) and extends up to said dielectric region, and after the formation of the recess (7A) and the removal of the dielectric region (6), the connection region (4) is formed by depositing an electroconductive material in the space (6A) created by the removal of the dielectric region (6), and the connection conductor (5) is formed by depositing an electroconductive material in the recess (7A). According to the invention, for the first material use is made of an organic material, and for the second material use is made of a material having a higher decomposition temperature than the organic material, and the dielectric region (6) is removed by heating it at a temperature above the decomposition temperature of the organic material yet below the decomposition temperature of the second material. A method according to the invention is very simple and, due to an optimal choice for the second material, may result in a high planarity of the device (10) obtained. For the dielectric region (4), use is preferably made of a photoresist, and for the dielectric layer (7), use is preferably made of a liquid material such as a SILK or SOG material which is converted to the solid state by heating.

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